

SELF-CONTAINED PROCESSOR SUBSYSTEM AS COMPONENT FOR SYSTEM-ON-CHIP DESIGN

Abstract

A System-on-Chip (SoC) component comprising a single independent multiprocessor subsystem core including a plurality of multiple processors, each multiple processor having a local memory associated therewith forming a processor cluster; and a switch fabric means connecting each processor cluster within an SoC integrated circuit (IC). The single SoC independent multiprocessor subsystem core is capable of performing multi-threading operation processing for SoC devices when configured as a DSP, coprocessor, Hybrid ASIC, or network processing arrangements. The switch fabric means additionally interconnects a SoC local system bus device with SoC processor components with the independent multiprocessor subsystem core.